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Ecological leadership: A new perspective on leadership

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Abstract

Given today's focus on the state of the environment and the developing role of corporate social leadership it could be argued that there is a need for the development of successful business leaders who have a positive relationship to the natural world. Gifford (2007) argued that any real change in sustainable practice will most likely happen at an individual level, through changes in attitudes and everyday behaviour. For this change to happen, an individual will need to feel connected to the natural world (Dunbar, 2004; Schroll, 2007). Roszak (1992) developed the notion of ecopsychology specifically to explore this relationship and suggest new ways to generate greater environmental awareness as well as ameliorate psychological problems caused or exacerbated by widespread alienation from nature. From this perspective it seems imperative that we develop people centred leaders who feel connected to the natural world whilst demonstrating solid performance, as measured by organisational and social indicators. This paper presents information from an International research project that might add further insights into the role outdoor education plays in the development of generic leaders who have a positive relationship to the natural world. Three questionnaires, an established measurement of generic transformational leadership (MLQ) and two established measurement of attitudes to and feelings about the natural world (the New Ecological Paradigm Scale and the Connectedness to Nature Scale), were administered to 214 (males, n=138 and females, n=76) International outdoor leaders with the implicit aim of assessing the nexus of transformational leadership theory and adventure based leadership development. The large and diverse cohort of participants has provided ground-breaking insights into transformational and ecological leadership styles. This paper outlines a descriptive analysis of findings and offers valuable information for those involved in training leaders. Throughout this presentation participants will be encouraged to contextualise the information for their specific circumstance.

Introduction

The nexus of research and practice in outdoor education is often centred around studies undertaken in the 1980's (Priest and Gass, 1997). Around the same time, leadership research in other fields advanced with a different perspective (Bass, 1985). More recently, Brymer and Gray (2006) introduced the transformational-transactional model as appropriate for understanding outdoor leadership. With today's focus on the state of the environment and the importance of considering ecological perspectives, most often spoken about in terms of corporate social responsibility and ecological sustainability, it is also important that leaders of organisations are positively committed towards the natural world (Fenwick, 2007). Likewise building such a connection is essential for human health and wellness and the development of effective holistic leadership. The aims of this paper are:

- To introduce the possibility that outdoor leaders have qualities desired by business
- To introduce research on the relationship between outdoor leaders and the natural world.

Our hope being that this model might eventually add further insights into leadership and introduce the concept that outdoor leadership training might also be a valuable asset to enhance the development of generic leadership qualities combined with positive commitment to the natural world.

Transactional-transformational leadership

For over two decades, the transactional-transformational leadership model has featured in leadership theory and practice (Bycio et al., 1995, Barling et al., 1996, Sosik et al., 1997). The terms were coined by the seminal work of Burns (1978) which were then further clarified by Bass (1985). This model strengthens and broadens our understanding of effective leadership in outdoor education (Hayashi and Ewert, 2006, Brymer and Gray, 2006). Both transactional and transformational leadership can be effective (Bass and Steidlmeier, 1999). Exceptional leaders are likely to employ both methodologies at varying times (Robbins et al., 1988). To this end, Cerni, Curtis, & Colmar (2008) state that "transformational leadership augments the effectiveness of transactional leadership; it does not replace transactional leadership" (p. 62).

Transactional leadership

Transactional leadership is the traditional form of leadership (Hsu et al., 2002) which encompasses the leader-follower relationship. It is based on a 'transaction' or interchange of information between followers and their leaders (Howell and Avolio, 1993). According to Brymer and Gray (2006), there are generally two key factors ascribed to transactional leadership.

Firstly, *contingent reward leadership* is both an active and positive interchange between the leader and follower. Upon successfully completing previously agreed goals or objectives (Bycio et al., 1995) followers are rewarded or recognized for their efforts. In some instances, followers may receive bonuses, merits or recognition. Contingent reward leadership is self-limiting as followers only achieve the negotiated level of performance (Kraaft et al., 2003). The reward provided is reliant on the satisfactory completion of the task (Howell & Avolio, 1993). While the leader and follower are agreeable with the pre-arranged relationship, the status quo will continue, performance will suffice and rewards will be consistent. Cerni, et al. (2008) and Klimoski and Hayes (1980), have found that under certain circumstances in the workplace, this type of leadership can enhance performance and heighten employee satisfaction.

Secondly, transactional leaders primarily approach followers when mishaps, mistakes or problems become evident. In this way, they avoid intervention until something has gone awry, amiss or wrong. Transactional leadership in this format is termed *management-by-exception* and can be either passive or active. In the active *management-by-exception* form, leadership hinges around the continual monitoring of followers performance with the anticipation of monitoring mistakes before they become a serious problem. At the outset the leader clarifies standards, expectations and criteria for assessment and benchmarking. Corrective action can be more immediate as the leader is continually measuring performance against expectations in an attempt to determine deviations.

In passive *management-by-exception* the leader awaits until the culmination of the task before assessing or determining whether a problem exists. Expectations and standards are only made apparent once a mistake has manifested. As a natural corollary, intervention is taken only after the problem has been identified or the mistake made (Howell & Avolio, 1993). This form of leadership has demonstrated negative impacts on satisfaction and performance (Howell & Avolio, 1993).

According to Gerstner and Day (1997) transactional leaders are principally motivated to satisfy their own self-interests. This has far reaching implications for outdoor education leadership in that leaders subtly direct or fabricate their approach to influence participants.

Transformational leadership

The type of leadership that has in the past been labelled charismatic or inspirational (Howell & Avolio, 1993) and goes beyond the concept of performance for reward is now termed transformational leadership. Increased motivation and job satisfaction is evident under a transformational leader (Cerni et al., 2008). For Howell and Avolio (1993) transformational leadership develops 'thinking' (*intellectual stimulation*), supports individuals (*individualised consideration*) and provides inspiration, faith and respect (*charismatic leadership*) (Barling et al., 1996).

Hsu et al. (2002) contend that elements of *intellectual stimulation* allow the leader to inspire followers to develop curiosity, problem solving and creative thinking. *Individualised consideration* encompasses both developmental orientations and individual orientations. When the leader assigns tasks that enhance motivation, innate abilities and potential it is classified as *developmental orientation*. Alternatively, *individual orientation* includes personal relationships, mutual understandings, familiarity and two-way communications. Hsu et al. (2002) advocate that *charismatic leadership* is divided into two distinct elements. The first, *inspirational leadership* is the ability to inspire and encourage a greater emotional attachment to the leader and the leader's vision. The second, *idealized influence* is the behavioural aspect of charisma and obtains the whole-hearted commitment from followers.

Developing a vision for the future and focus on longer term goals is a hallmark of transformational leadership (Kirkpatrick and Locke, 1997). They are comfortable pursuing risk and challenging the status quo and demonstrate high internal locus of control (Howell & Avolio, 1993). Systems are seen as flexible and dynamic to meet the requirements of the vision and goals. Transformational leaders stimulate followers and encourage them 'to transcend their own self-interests for a higher collective purpose, mission, or vision' (Howell & Avolio, 1993, p. 891). They focus on facilitating self-development and growth (Gerstner and Day, 1997), Peterson, 1996). Motivation for this type of leadership is based on 'higher order values and beliefs' (Gerstner & Day, 1997; p.838). Maude (1997) espoused that becoming an effective leader was synonymous with becoming oneself.

Transformational leaders enhance commitment (Barling et al., 1996), develop acceptance of responsibility and increase followers' effort (Howell & Avolio, 1993). Invariably, performance eclipses the expected or negotiated levels. For Howell and Avolio (1993) this is inextricably linked to the level of commitment, intrinsic motivation, personal development and sense of purpose demonstrated by the leader.

Human-nature relationship

The proposal that there is a relationship between humans and nature is based on the assumption that there is some degree to which humans and nature are separate entities. Dewey (1958) suggested that the very attempt by humans to define and describe their subjective experience of life emphasises the need for this separation since an "unanalysed world does not lend itself to control" (p. 13). Humans consciously separate themselves from the natural world in which they evolved, and this shapes the ways in which they define their relationship with nature. The motivation to control, conserve or protect nature is determined by our perception of this relationship.

Since the industrial revolution, the development of a lifestyle lived predominantly indoors has resulted in even less contact with nature. Research over the last twenty years has gradually been identifying the human health benefits attributed to re-connecting with the natural environment. The significance of feeling connected to natural environments, families and friends are described as a foundational requirement for human health and wellbeing (Maller et al., 2008).

Schroeder (2007) indicates that the moral judgements made upon human actions are indicated by the degree to which humans are seen as either part of, or apart from, nature. When considering transformational eco-leadership it seems critical to determine the exact ways in which people perceive their relationship with nature in order to gain a sense of the actions they may or may not be encouraging. The early findings of Schultz's (2002) work indicated that by feeling connected to the natural world a person is more likely to be committed to positively interact with and protect the natural world. Gifford (2007) argued that any real change in sustainable practice will most likely happen at an individual level, through changes in attitudes and everyday

behaviour. For this change to happen, an individual will need to feel connected to the natural world (Dunbar, 2004, Schroll, 2007). Roszak (1992) developed the notion of ecopsychology specifically to explore this relationship and suggest new ways to generate greater environmental awareness as well as ameliorate psychological problems caused or exacerbated by widespread alienation from nature.

The aim of this project was to undertake a descriptive analysis of the character of outdoor leaders with specific reference to leadership qualities as determined by transformational leadership research and their beliefs, feelings and intentional behaviours towards the natural world.

The specific research questions were:

- What is the outdoor leader's relationship to transformational leadership, emotional feelings about the Natural World and beliefs about the Natural world?
- Are the leadership characteristics different from the general population and other studies (e.g. Hayashi and Ewert, 2006).

Research Methodology

Participants

Participants in this study were outdoor leaders from all over the world. Participants were asked to volunteer for the study, via an email informing them of the study outline and requirements, if they identified themselves as an outdoor leader. The survey was completed anonymously and online. Participants were also asked for demographic information and asked to identify what type of outdoor leader they were (education, tourist, camping, recreational, therapeutic or other).

Instruments

Participants were asked to complete three questionnaires: the Multifactor Leadership Questionnaire, leader form (MLQ) (Avolio and Bass, 1995), the Connectedness to Nature scale (CNS) (Mayer and Frantz, 2004) and the New Ecological Paradigm Scale (NEP) (Dunlap et al., 2000).

The MLQ was developed by Bruce Avolio and Bernard Bass (1995) as a means to measure all nine leadership components identified in the transactional-transformational leadership model and has become the most reliable research tool for measuring transformational leadership. The MLQ is based on a scale from 0-4 (Not at all, Once in a while, Sometimes, Fairly often, Frequently, If not always). Scores from 2-4 inclusive would indicate a positive response.

The NEP and CNS are two scales most commonly used to explore beliefs and feelings of connectedness to the natural world (Schultz, 2002). The NEP was developed over thirty years ago by Dunlap and Van Liere (1978) and originally termed the New Environmental Paradigm. The NEP is now the foremost International tool for measuring beliefs about the natural world (Dunlap, 2008). The CNS measures an individual's trait levels of emotional connection to the natural world. It is a relatively new tool for understanding ecological behaviour based on ecopsychology theory and employed to predict behaviour (Mayer and Frantz, 2004). Both questionnaires are based on a 1-5 scale (Strongly disagree to Strongly agree). By combining both scales the researchers aim to develop a snap shot of beliefs and emotional feelings towards the natural world and therefore an idea of intended behaviour. The three questionnaires were combined as one online survey with additional material asking for demographics and self assessments of type of leader included before the surveys. An email inviting outdoor leaders to participate was sent out to networks and interest groups. A basic descriptive statistical analysis was used to interpret data.

Results

One hundred and four surveys (male n= 70, female n= 34) were completed with twelve questionnaires started but not completed. The highest representation as determined by a self assessment was from the Education sector with seventy one (68.3%) participants claiming to focus on education (see Table 1).

Table 1: Descriptive statistics about the participants

Total Participants		104	
Gender	Male	70	67.3%
	Females	34	32.7%
Average Age		39.8 (11.3)	
Area of Expertise	Tourism	4	3.8%
	Education	71	68.3%
	Recreation	14	13.5%
	Camping	4	3.8%
	Therapy	7	6.7%
	Other	4	3.8%

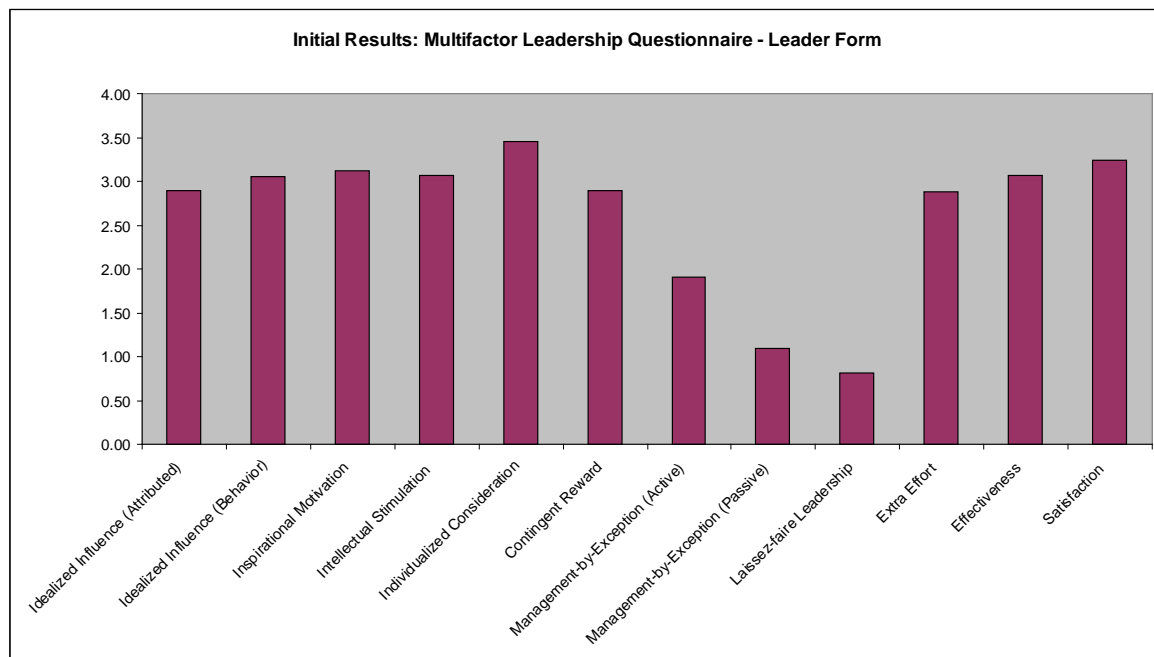
Transformational leadership

Results from the MLQ show that outdoor leaders score highly in the transformational characteristics and contingent reward and lower in the management by exception and laissez-faire characteristics. Outdoor leaders also scored highly for satisfaction, effectiveness and effort (see Table 2 and Figure 1).

Table 2: Detailed results Multifactor Leadership Questionnaire (MLQ) – Leader form

Category	Combined Mean (SD)
<i>Idealized Influence (Attributed)</i>	2.89 (0.64)
<i>Idealized Influence (Behaviour)</i>	3.06 (0.59)
<i>Inspirational Motivation</i>	3.13 (0.58)
<i>Intellectual Stimulation</i>	3.06 (0.63)
<i>Individualized Consideration</i>	3.45 (0.55)
Contingent Reward	2.89 (0.71)
Management-by-Exception (Active)	1.91 (0.82)
Management-by-Exception (Passive)	1.09 (0.63)
<i>Laissez-faire Leadership</i>	0.81 (0.55)
<i>Extra Effort</i>	2.88 (0.64)
<i>Effectiveness</i>	3.07 (0.57)
<i>Satisfaction</i>	3.24 (0.59)

Figure 1: Results for the Multifactor Leadership Questionnaire



Comparison with general population and Hayashi and Ewert (2006) results

Results from the MLQ were compared with the general population (see Table 3). A basic descriptive evaluation of the results from outdoor leaders in this study demonstrated a higher level of transformational leadership qualities than the general population. Results also indicated a lower level of transactional leadership qualities except for the contingency reward which was higher.

Table 3: Comparison of Multifactor Leadership Questionnaire (MLQ) Results

Leadership Style	Brymer et al. MLQ Scale Scores <i>Mean & (SD)</i>	Mean Diff.	Norm (n=1545) <i>Mean</i>	Mean Diff.
Transformational Leadership				
Idealized Influence (Attributed)	2.89 (0.64)	0.21	2.91	-0.3
Idealized Influence (Behaviour)	3.06 (0.59)	1.5	2.76	0.3
Inspirational Motivation	3.13 (0.58)	0.1	2.89	0.24
Intellectual Stimulation	3.06 (0.63)	0.21	2.76	0.3
Individualized Consideration	3.45 (0.55)	0.29	2.84	0.6
Transactional Leadership				
Contingent Reward	2.89 (0.71)	1.2	2.91	-0.03
Management-by-Exception (Active)	1.91 (0.82)	0.27	1.65	0.26
Management-by-Exception (Passive)	1.09 (0.63)	-0.3	1.06	0.03
Nontransactional Leadership				
Laissez-faire Leadership	0.81 (0.55)	-0.27	0.71	0.1
Outcome Factors				
Extra Effort	2.88 (0.64)	0.13	2.74	0.14
Effectiveness	3.07 (0.57)	0.17	3.06	0.01
Satisfaction	3.24 (0.59)	0.21	NA	NA

Connectedness to Nature and the New Ecological Paradigm

Results from both the NEP and CNS (see Table 4 & 5) demonstrated that outdoor leaders in this study had positive attitudes, beliefs and emotional connections to the natural world.

Table 4: Results from New Ecological Paradigm Scale

Central Aspects	Mean/5 (SD)
<i>Human Domination over Nature</i>	
• Humans have the right to modify the natural environment to suit their needs	2.47 (1.11)
• Plants and animals have as much right as humans to exist	4.52 (0.98)
• Humans were meant to rule over the rest of nature	1.92 (1.11)
<i>Human Exemptionalism</i>	
• Human ingenuity will insure that we do NOT make the earth unliveable	2.45 (1.08)
• Despite our special abilities humans are still subject to the laws of nature	4.47 (0.78)
• Humans will eventually learn enough about how nature works to be able to control it	1.91 (0.93)
<i>Balance of Nature</i>	
• When humans interfere with nature it often produces disastrous consequences	4.07 (0.87)
• The balance of nature is strong enough to cope with the impacts of modern industrial nations	2.33 (1.26)
• The balance of nature is very delicate and easily upset	3.76 (1.08)
<i>The Risk of Ecocrisis</i>	
• Humans are severely abusing the environment	4.30 (0.89)
• The so-called 'ecological crisis' facing humankind has been greatly exaggerated	1.92 (0.98)
• If things continue on their present course, we will soon experience a major ecological catastrophe	3.88 (0.98)
<i>Limits to Growth</i>	
• We are approaching the limit of the number of people the earth can support	3.79 (1.14)
• The earth has plenty of natural resources if we just learn how to develop them	2.60 (1.20)
• The earth is like a spaceship with very limited room and resources	3.62 (1.06)

Table 5: Results from Connectedness to Nature Scale

Question	Mean/5 (SD)
1. I often feel a sense of oneness with the natural world around me	4.50 (0.76)
2. I think of the natural world as a community to which I belong	4.55 (0.75)
3. I recognize and appreciate the intelligence of other living organisms	4.45 (0.82)
4. I often feel disconnected from nature	1.67 (0.79)
5. When I think of my life, I imagine myself to be part of a larger cyclical process of living	4.26 (0.97)
6. I often feel a kinship with animals and plants	3.99 (1.09)
7. I feel as though I belong to the Earth as equally as it belongs to me	4.00 (1.13)
8. I have a deep understanding of how my actions affect the natural world	4.44 (0.72)
9. I often feel part of the web of life	4.14 (0.92)
10. I feel that all inhabitants of Earth, human, and nonhuman, share a common 'life force'	3.70 (1.18)
11. Like a tree can be part of a forest, I feel embedded within the broader natural world	4.04 (0.89)
12. When I think of my place on Earth, I consider myself to be a top member of a hierarchy that exists in nature	2.38 (1.03)
13. I often feel like I am only a small part of the natural world around me, and that I am no more important than the grass on the ground or the birds in the trees	3.58 (1.19)
14. My personal welfare is independent of the welfare of the natural world	2.25 (1.31)

Discussion

The findings of this current study provide a general overview of transformational leadership qualities and attitudes, beliefs and emotional connection to the natural world and also a comparison with the general population. Data obtained from the outdoor leaders in this study suggest that they have a higher transformational leadership style than the general population. Results from the contingency reward are also higher. However, the results from the management by exception and laissez faire categories were lower.

Results from this study indicate that outdoor leaders are concerned about individuals and wish to support individual growth but are also comfortable providing reward for goal achievement. Outdoor leaders in this study demonstrated negative response to management by exception and laissez faire concepts. This would indicate that leaders in the field are more comfortable supporting the growth of the people they lead and less interested in watching for mistakes or taking a back seat. When comparing to the general population it would seem that outdoor leaders in this study demonstrated slightly greater transformational leadership qualities in all areas except the idealized influence (attributed). Leaders in this study were also slightly higher in transactional qualities except contingent reward. However, the significance of the difference has not been assessed. Still it would seem that outdoor leaders do demonstrate qualities that are accounted for under the transformational-transactional leadership model.

Connectedness to nature and New Ecological paradigm

Results obtained from this study indicate that outdoor leaders are very positively related and emotionally connected to the natural world. Perhaps as this is a career that they have chosen these results would be expected. However, by combining results from the MLQ, CNS and NEP it seems that leaders in this study do match the transformational leadership model and also positive ecological qualities.

Summary

Research focusing on leadership indicates that Transformational leadership is strongly linked to effectiveness as measured by social or organizational factors. Research on the relationship between the natural world and humanity indicates that positive beliefs and feelings of connectedness have a strong correlation to the desire to care for the natural world. In today's climate where organisations are expected to account for financial, social and ecological bottom lines it is envisaged that effective leaders as traditionally measured who have a strong ecological focus will be best placed to lead organizations to effectively undertake all three outcomes. The preliminary findings from this project show that outdoor leaders are both transformational and positively oriented to the natural world. This would indicate that outdoor leaders might have qualities that would benefit organizations as a whole. The next stage is to explore whether outdoor leadership education develops these skills, if this is so, how outdoor leadership courses may inform leadership development.

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